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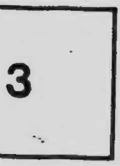

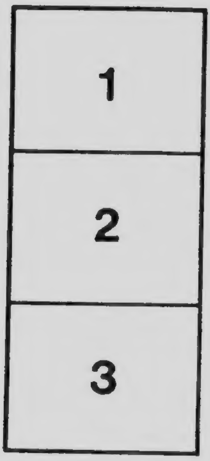

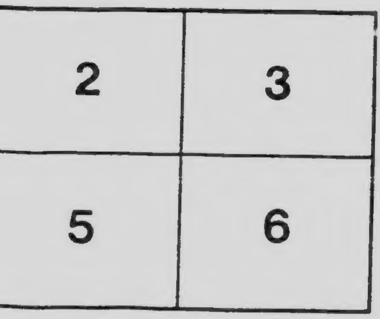

INCREASING PRODUCTION BUT REDUCING COSTS OF DAIRY PRODUCTS BY USING SILAGE MADE FROM PEAS AND OATS OR OATS ALONE.

BY

G. H. HUTTON, B.S.A.

The value of the silo, particularly for Alberta dairymen, is beginning to be more generally recognized each year. While no large volume of experience has been accumulated in regard to the practicability of the silo in different parts of the province, sufficient work has already been done to prove that as a measure of economy in the production of milk and butter, the silo is destined to occupy an important place.

At the Lacombe Station experiments have been conducted during the past two years in which the feeding value of silage made from peas and oats and silage from corn has been compared with various other fodders ordinarily used by dairymen, including peas and oats cut for green feed and cured in the sheaf.

COST OF PRODUCING BUTTER.

In the work done during the season of 1914-15 some striking economies were effected when silage made from peas and oats was fed as compared with the same fodder cut at the same stage of development and cured in the field as green feed. A pound of butter costs 16·7 cents when peas and oats silage was fed, and 20·84 cents when the same feed cured as green feed was used. In each case this is the average of the results of four trials in which the whole herd was used and it shows a saving of 3·14 cents per pound in the cost of a pound of butter, directly due to the method followed in curing the fodder—a saving of 20 per cent.

The price at which the fodders have been charged to the cattle is $3 per ton for silage and $10 per ton for green feed. While the shrinkage when curing in the field varies greatly, depending upon the stage of maturity at which the crop is cut, we believe that these values bear approximately the same relation to each other as does the green weight of the material put in the silo as compared with its weight when cured and ready for stacking. The supply of moisture in the soil at the time the crop is cut also has a bearing on the shrinkage while curing. In 1915 there had been a period of eight to ten days of dry weather prior to the time when the crop was cut for ensiling and the amount of moisture carried by the crop at that time

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DOMINION EXPERIMENTAL FARMS.

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was not nearly as great even though it was in the same stage of development as it was the previous year. We therefore conclude that the amount of moisture carried by the crop at the same stage of maturity varies materially. Taking the figures so far secured however, the relation between the green weight and the cured weight as above estimated is approximately correct and the value of $3 per ton for silage and $10 per ton for green feed appears from the tests so far made to be relatively correct.

VALUE OF PEAS AND OATS SILAGE AS COMPARED WITH CORN.

Since a crop can be produced weighing from eight to twelve tons per acre green weight, it would appear that the dairymen of Alberta were not particularly handicapped in the matter of competing with the dairymen of Eastern Canada or the United States where corn forms the chief bulky fodder. This is particularly true when we consider that we can produce a fairly heavy tonnage of peas and oats or oats alone on relatively much cheaper land. From the results secured here it is apparent that peas and oats made a silage superior to corn such as we have been able to grow. This is due no doubt to the fact that corn does not reach the dough stage while peas and oats reach that stage of maturity carrying maximum nutrients. Those parts of the province that can bring corn to the proper stage of maturity for ensilage would no doubt find silage made from corn equal to that made from peas and oats. However, corn is a doubtful crop in this section of the province, for during only one-half of the years since this Station was established have we been able to grow a crop of fodder which we would consider profitable. If a farm were running to maximum capacity it is clear that the owner could not depend upon a crop which would produce only every alternate year. Peas and oats are a safe crop. The tonnage produced when valued at $3 per ton gives a satisfactory return from the land and the advantage of being able to reduce butter costs from 20 to 25 per cent as compared with the cost of butter made from the fodder producing the next best results, should recommend this crop to every progressive dairyman.

SOWING AND HARVESTING THE CROP.

When peas and oats are sown together we use two bushels of oats and [illegible]ne of peas to the acre, sowing immediately following the crop intended for th[illegible]ng. Where oats are used alone three and a half bushels of seed to the acre shou[illegible]e used. In ordinary seasons a crop sown at this time will be ready to put in the s[illegible] before the crop intended for threshing is cut. The green feed should be cut when the oats are in the late milk or early dough stage, being harvested with the binder and cut into the silo at once before there is an opportunity for loss of moisture. The cutting box should be set to cut as short as possible and the silage well tramped, particularly about the edges. Two or three active men should be allotted to the job of keeping the ingoing silage well spread and tramped. If attention is given to this matter there will be no loss due to an over-supply of air in silage which would carry fermentation too far and spoil the silage. We have not lost a pound of silage during the three years in which the silo has been in use here except at the top where about six or eight inches of the surface has been lost each year while curing in the silo before feeding commences.

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